XXX. INFECTIOUS DISEASES OF DOUBTFUL NATURE.

(1) FEBRICULA—EPHEMERAL FEVER.

Definition.—Fever of slight duration, probably depending upon a variety of causes.

A febrile paroxysm lasting for twenty-four hours and disappearing completely is spoken of as ephemeral fever. If it persists for three, four, or more days without local affection it is referred to as febricula.

The cases may be divided into several groups:

(*a*) Those which represent mild or abortive types of the infectious diseases. It is not very infrequent, during an epidemic of typhoid, scarlet fever, or measles, to see cases with some of the prodromal symptoms and slight fever which persist for two or three days without any distinctive features. I have already spoken of these in connection with the abortive type of typhoid fever. Possibly, as Kahler suggests, some of the cases of transient fever are due to the rheumatic poison.

(*b*) In a larger and perhaps more important group of cases the symptoms develop with dyspepsia. In children indigestion and gastro-intestinal catarrh are often accompanied by fever. Possibly some instances of longer duration may be due to the absorption of certain toxic substances. Slight fever has been known to follow the eating of decomposing substances or the drinking of stale beer; but the gastric juice has remarkable antiseptic properties, and the frequency with which persons take from choice articles which are "high," shows that poisoning is not likely to occur unless there is existing gastro-intestinal disturbance.

(*c*) Cases which follow exposure to foul odors or sewer-gas. That a febrile paroxysm may follow a prolonged exposure to noxious odors has long been recognized. The cases which have been described under this heading are of two kinds: an acute severe form with nausea, vomiting, colic, and fever, followed perhaps by a condition of collapse or coma; secondly, a form of low fever with or without chills. A good deal of doubt still exists in the minds of the profession about these cases of so-called sewer-gas poisoning. It is a notorious fact that workers in sewers are remarkably free from disease, and in many of the cases which have been reported the illness may have been only a coincidence. There are instances in which persons have been taken ill with vomiting and slight fever after exposure to the odor of a very offensive post-mortem. Whether true or not, the idea is firmly implanted in the minds of the laity that very powerful odors from decomposing matters may produce sickness.

(*d*) Many cases doubtless depend upon slight unrecognized lesions, such as tonsillitis or occasionally an abortive or larval pneumonia. Children are much more frequently affected than adults.

The *symptoms* set in, as a rule, abruptly, though in some instances there may have been preliminary *malaise* and indisposition. Headache, loss of appetite, and furred tongue are present. The urine is scanty and high-colored, the fever ranges from 101° to 103°, sometimes in children it rises higher. The cheeks may be flushed and the patient has the outward manifestations of fever. In children there may be bronchial catarrh with slight cough. Herpes on the lips is a common symptom. Occasionally in children the cerebral symptoms are marked at the outset, and there may be irritation, restlessness, and nocturnal delirium. The fever terminates abruptly by crisis from the second to the fourth day; in some instances it may continue for a week.

The *diagnosis* generally rests upon the absence of local manifestations, particularly the characteristic skin rashes of the eruptive fevers, and most important of all the rapid disappearance of the pyrexia. The cases most readily recognized are those with acute gastro-intestinal disturbance.

The *treatment* is that of mild pyrexia—rest in bed, a laxative, and a fever mixture containing nitrate of potash and sweet spirits of nitre.

(2) WEIL'S DISEASE.

Acute Febrile Icterus.—In 1886 Weil described an acute infectious disease, characterized by fever and jaundice. Much discussion has taken place concerning the true nature of this affection, but it has not been definitely determined whether it is a specific disease or only a jaundice which may be due to various causes. The majority of the cases have occurred during the summer months. The cases have occurred in groups in different cities. A few cases have been reported in this country (Lanphear). Males are most frequently affected. Many of the cases have been in butchers. The age of the patients has been from twenty-five to forty.

The disease sets in abruptly, usually without prodromata and often with a chill. There are headache, pains in the back, and sometimes intense pains in the legs and muscles. The fever is characterized by marked remissions. Jaundice appears early. The liver and spleen are usually swollen; the former may be tender. The jaundice may be light, but in many of the cases described it has been of the obstructive form, and the stools have been clay-colored. Gastro-intestinal symptoms are rarely present. The fever lasts from ten to fourteen days; sometimes there are slight recurrences, but a definite relapse is rare.

Albumen is usually present in the urine; hæmaturia has occurred in some cases.

Cerebral symptoms, delirium and coma, have been met.

In the few post-mortems which have been made nothing distinctive has been found. Its occurrence as an independent malady, apart from other infectious processes, has scarcely yet been definitely established.

(3) MILK-SICKNESS.

This remarkable disease prevails in certain districts of the United States, west of the Alleghany Mountains, and is connected with the affection in cattle known as the *trembles*. It prevailed extensively in the early settlements in certain of the Western States and proved very fatal. The general opinion is that it is communicated to man only by eating the flesh or drinking the milk of diseased animals. The butter and cheese are also poisonous. In animals, cattle and the young of horses and sheep are most susceptible. It is stated that cows giving milk do not themselves show marked symptoms unless driven rapidly, and, according to Graff, the secretion may be infective when the disease is latent. When a cow is very ill, food is refused, the eyes are injected, the animal staggers, the entire muscular system trembles, and death occurs in convulsions, sometimes with great suddenness. Nothing definite is known as to the cause of the disease. It is most frequent in new settlements.

In man the symptoms are those of a more or less acute intoxication. After a few days of uneasiness and distress the patient is seized with pains in the stomach, nausea and vomiting, fever and intense thirst. There is usually obstinate constipation. The tongue is swollen and tremulous, the breath is extremely foul and, according to Graff, is as characteristic of the disease as the odor is of small-pox. Cerebral symptoms—restlessness, irritability, coma, and convulsions—are sometimes marked, and there may gradually be produced a typhoid state in which the patient dies.

The duration of the disease is variable. In the most acute forms death occurs within two or three days. It may last for ten days, or even for three or four weeks. Graff states that insanity occurred in one case. The poisonous nature of the flesh and of the milk has been demonstrated experimentally. An ounce of butter or cheese, or four ounces of the beef, raw or boiled, three times a day will kill a dog within six days. No definite pathological lesions are known. Fortunately, the disease has become rare, and the observation of Drake, Yandell, and others, that the disease gradually disappears with the clearing of the forests and improved tillage, has been amply substantiated. It still prevails in parts of North Carolina.

(4) MALTA FEVER.

This disease, also known as Mediterranean fever, Neapolitan fever, and rock fever, has been studied particularly by the naval and military medical officers who have been stationed on the island of Malta. It prevails also in Naples and other districts of the Mediterranean. While endemic in the island of Malta, the disease in some years reaches epidemic proportions. Young persons are, as a rule, affected. The incubation may be from six to ten days.

The *symptoms* are thus briefly and clearly described in an editorial in

the British Medical Journal: "The disease declares itself gradually, with headache, sleeplessness, loss of appetite, and thirst, often without shivering or diarrhœa, and without spots. Symptoms of this kind, with more or less severity, last for three or four weeks; apparent but deceptive convalescence then usually sets in, to be followed in a few days by a relapse, with rigors, intense headache and fever, with, frequently, diarrhœa. In this state the patient may continue for five or six weeks, with more or less delirium. Improvement again sets in, to be followed, it may be, by another relapse in about ten days or a fortnight, with shivering, headache, sleeplessness, great debility, with night-sweats, pains in the hips, knees, ankles, and elbows, and often in one or both testicles. Again, the patient enters on a state of convalescence, which may last for a month or six weeks. The old symptoms may again appear, with extreme debility, a thickly coated tongue, with thirst, a temperature ranging from 105° Fahr. in the evening to nearly normal in the morning, with night-sweats bringing no relief to the general distress. The rheumatic symptoms are the most constant and the most distressing; all the joints, large and small, may suffer. Dr. Veale described cases in which the intervertebral joints, especially those of the lumbar region and the sacro-iliac synchondroses, were so severely affected that the patient "dreads every movement"; he will lie for days in one position, risking the formation of bed-sores, and resisting the desire to evacuate his bowels rather than encounter the suffering that a movement will entail. Oftentimes the tendo Achillis and the fibrous structures around the ankle-joint are involved; but perhaps the lumbar aponeuroses and the sheaths of the nerves issuing from the sacral plexus are still more commonly affected." *

The nature of the disease is still under discussion. McLean, of the Army Medical School, in 1879, suggested that it was a typho-malarial fever, and Veale called it *febris complicata*. Others have supposed that it is an anomalous form of malaria, but it does not behave like any ordinary form of paludal fever and resists quinine. This is a question which could be determined positively by the blood examination. According to Bruce, no characteristic typhoid lesions are found in fatal cases. This author has described the presence of a micrococcus in the spleen. The Italian observers have noted enlargement of the mesenteric glands, and Cantani regards it as an adeno-typhoid. The identity of Malta and the so-called rock fever of Gibraltar is, however, by no means certain. In the number of the Journal referred to, Surgeon Perry states that of about a hundred autopsies during four years in Gibraltar, in cases of the so-called rock fever, in not one were the typical lesions of typhoid absent. On the other hand, it is held to be a fever due to chronic poisoning with fæcal emanations.

Fortunately, the mortality is not great. With reference to the treat-

* British Medical Journal, vol. i, 1889.

ment Bruce concludes that it should be directed principally to keeping the patient's strength up by fluid, easily digested food, by stimulants when required and by attention to ordinary hygienic principles. The removal of the patient from the infected area does not cut short the fever.

(5) MOUNTAIN FEVER.

Residence for a time at a high altitude is in some instances followed by a group of symptoms to which the term mountain sickness or mountain fever has been given. Several distinct diseases have undoubtedly been described. It is by no means certain that there is a special affection to which the term may be applied. An important group, the *mountain anæmia*, is associated with the *anchylostoma*, which has not yet been met with in this country. A second group of cases belongs unquestionably to typhoid fever, and undoubted instances of this disease occurring in mountainous regions in the West are referred to as mountain fever.

In the very full and clear report which Hoff * gives of five cases, the clinical picture is that of typhoid fever, and one of the patients died of perforation of the ileum with well-defined typhoid lesion. Even from the clinical reports, unless biased by notions of a rigidly characteristic picture of the disease, one might have said that all of Surgeon Hoff's cases were typhoid fever, and the post-mortem record leaves no question as to the nature of the malady. Woodward, commenting upon this communication, states that there is in the United States Army Medical Museum a second specimen from the case of so-called mountain fever contributed by Surgeon Girard.

Smart, who reviewed the entire question a few years ago, regarded the disease as a typho-malarial fever; but there is nothing in his account opposed to the opinion that it is a typhoid fever.

There is a third group to which, perhaps, alone the term mountain sickness should be applied—cases which present respiratory and cardiac symptoms, due to a high altitude. The pulse is rapid, there are giddiness, headache, sometimes nausea and vomiting, sensations of great prostration, and considerable respiratory distress. The original cases described by General Fremont were of this nature.

(6) MILIARY FEVER—SWEATING SICKNESS.

The disease is characterized by fever, profuse sweats, and an eruption of miliary vesicles. The disease prevailed and was very fatal in England in the fifteenth and sixteenth centuries, but of late years it has been confined entirely to certain districts in France (Picardy) and Italy. An epidemic of some extent occurred in France in 1887. Hirsch gives a

* American Journal of the Medical Sciences, January, 1880.

chronological account of 194 epidemics between 1718 and 1879, many of which were limited to a single village or to a few localities. Occasionally the disease has become widely spread. Slight epidemics have occurred in Germany and Switzerland. They are usually of short duration, lasting only for three or four weeks—sometimes not more than seven or eight days. As in influenza, a very large number of persons are attacked in rapid succession. In the mild cases there is only slight fever, with loss of appetite, an erythematous eruption, profuse perspiration, and an outbreak of miliary vesicles. The severe cases present the symptoms of intense infection—delirium, high fever, profound prostration, and hæmorrhage. The death-rate at the outset of the disease is usually high, and, as is so graphically described in the account of some of the epidemics of the middle ages, death may follow in a few hours.